CHAPTER 2
REVIEW OF EARLIER WORKS,
OBJECTIVES AND
METHODOLOGY
REVIEW OF EARLIER WORKS

Nanjappa explains that the rationale of promoting village industries lies in enlargement of employment opportunities in rural areas, improvement of standard of living of rural communities, reduction in exodus of rural labour to urban centres and reduction in regional economic imbalance.¹

According to the study made by the mild credit and investment of India to create one job in large scale industries is Rs.40000 will be required while only Rs.3000 to Rs.5000 will be required to create a job in village industry.

Low capital investment and concession given in the Plans have been a boon for skilled artisans in rural areas. The Institute of Manpower Research while examining the impact of rural industries profit has made some observations: (a) the rural artisans have not been able to avail of new opportunities in the recent rural development activities (b) the existing training schemes have longer duration than neccessary and (c) the special programme for the training of the artisans have not been very useful.

Desai observes that lack of progressive and entrepreneurial aptitude among the rural people have been a major impediment in promoting and developing industries in rural sector;
The Karve Committee has recommended that new capital investment in the rural industries, as far as feasible must be in the improved equipment facilitating modernisation of these activities. Tins will improve the technological base and avoid large scales technological unemployment.'

Regarding the role of government, in rural industrialisation, Sundaruin opines that no programme be it KVI or I landloom, or even small-scale industries has community consciousness sufficient to sustain the development of this sector.'

The planning, commission has worked out the capital required for employing one person in various industries during early sixties and it reveals that lic capital required for employing one person in K and V.I., and S.I. from Rs.1000 to Rs.>000 whereas it is from Rs..50000 to 160000 for heavy machines, Iron and steel industries. As such small scale and village industries are best suited to India, which has the labour abundant and capital scarce economy.'

N.Chalapathi Rao has assessed that KVI sector has played a vital role in development of de-centralised rural industrialisation of the economy. Due to the labour intensive and capital scarce characters these industries have the potential not only to provide gainful employment to the rural poor in rural areas but they also ensure maximum utilisation of local human resources and local raw materials.
Durairaj N et al., observed that concentration of a particular cottage industry in a place become more prosperous than those, widely scattered in different places. The writers evolved the following location quotient

LQ for industry i in the State (or) District k is defined as follows.

\[ LQ = \frac{E_{ik}}{E_{k}} \]

\[ \frac{E_{i}}{e} \]

\[ E_{ik} = \text{Employment in its (1,2, . . ) industries in k th (1,2, . . .) State.} \]

\[ E_{k} = \text{Total industrial employment in k th States.} \]

\[ t = \text{Employment in its industry in all States.} \]

\[ e = \text{Total industrial employment in all industries in all States.} \]

They computed state-wise location quotient for 23 village industries and concluded that industries with location quotient greater than one is considered ideal for the location in the respective states.

Ramasamy D., emphasized the role of technology in KVI to improve the quality of products. He insisted on the need for the supply of inputs of improved quality, which alone will protect many dwindling cottage industries.

Smitra Mehrotra made a study on village industries in Rajasthan and highlighted the impact of village industries on employment and income. In his study he pin-pointed some of the major difficulties faced by the beneficiaries such as inadequacy of package assistance, delay in
sanction and distribution of loans, misutilisation of financial assistance and marketing of products.

Yhesvir Tyagi advocated a viable technology in the Indian context should be one that maximises employment minimises capital and economises on the energy reduces dependence on foreign sources turnout products that are cheaper and good and finally keeps the environment clean. Modernisation of cottage and village industries maintaining a dignified relationship between the man and the machine is advocated for increasing the employment and output.

Vasant Desai'' observes that rural industries are vital for rural development for they render yeoman services by ensuring, balanced and integrated development of rural areas.

According to Mohammed fa/.al ' about KO per cent of India's population lives in rural areas. Agriculture is the main source of hvelyhood for 75 percent of people in the countryside. But agriculture alone can not provide productive employment to all. As such the necessity to findout and develop other avenues which may make-available work to idle hands in rural surroundings. (Inless tins is done no serious assault on poverty can be made. Rural industrialisation seems to be the answer lo protect the interest of the poor and the weaker.

Krislmasamy O R.,14 observed that the organised modern industrial sector has not generated much employment as it adopts labour saving technology. The total number of persons employed in the sector was 2.9 million only at the end of 1981 in total population of 700
million. The average annual growth of employment in this sector is less than 0.5 million which is too small to be a mark of diversification of employment. Hence rural industrialisation is essential for employment generation for the benefit of rural people. A breakthrough in rural industrialisation calls for a radical change in the industrial policy. The rural industries should be integrated with agriculture and organised industrial sector with forward and backward linkages.

Reports of Ilic evaluation committees for Khadi and village industries (1959) Report of the working group on Khadi and Village Industries (1965)""' report of the Khadi and Village Industries (1968)""" and Report of the Khadi and Village Industries Review committee (RJX7)""" sought to evaluate the performance of Khadi and Village industries and to suggest measures for further strengthening these programs."

Report for the Rice milling committee (1965)"" proposed ban on further expansion in the capacity of rice mills and recommended encouragement to hand pounding industry run by cooperatives registered societies and social workers. Amber charka evaluation report by N. Srinivasan (1962)"" evaluated the performance of not only Ambar charka but also the entire work of khadi from cotton to cloth and made recommendations for cost reduction of Khadi.

All India Saranjam Sammelan Rajkot report (1968)"" and Report of the Science and technology panel for Khadi and Village Industries (1975)"" high-lighted the possibilities of improvement in the technology of khadi and village industries.
Many papers and books on khadi village industries and small-scale industries have been published and those writings which have been examined for this study are listed in the bibliography.

Writers like Arunehandra Guha (1964)²³ Charles K.J. (1973) Sangle. G.K. (1969)²⁵ Bhagwan Prasad (1981)²⁶ and Peerzade (1982)²⁷ have highlighted the role of small and village industries in the economic development of India. Sudalaimuthu S²⁸, has sought to evaluate the marketing practices as adopted in Khadi and village Industries. Anunukam P²⁹ in his "TamilNadu Khadi and Village Industries Board, a study of financial management"²⁹ has sought to evaluate the performance of the Board over a period of time in respect to trends in capital intensity in Khadi and Village Industries, profitability of operations, turnover of working capital and pattern of mobilisation and development of financial resources covering both long term and short term hinds used by the Board.

Desikachary V.K. (1971)"³⁰, and (1973)³¹ Arputlharaj (1979)³² and Pandit Rao (1981)³³ are among those who have dealt with problems of these industries in respect of supply of raw materials, mobilisation of finance and competition from the organised sector. Kavmder D.J.(1980)³⁴ and Mohanlai Gupta (1982)³⁵ have studied improvement in technology of these activities.
Seeranga Rajan R, has conducted a case study of the financial performance of two Khadi Institutions namely Gandhi Ashram, Thiruchengodu, and Gandhigram Khadi and Village Industries Public Charitable trust. In his study he has covered the financial performance involving both long term and short term funds employed by the institutions and he concluded that the profitability of activities was very meagre in Gandhi Ashram, Thiruchengodu and that it is higher than the cost of capital in Gandhigram Trust.

Illic unpublished Ph.D. thesis of Radhnkrislinan S deals with the financial conditions of four Sarvodaya institutions that have functioned in the undivided Thiruehirapalli District proving the hypothesis that growth in production and sales in KV1 would be negligible due to the fierce competition from the organised sector. Horizontal expansion of production cycle increase the value of Net Value Added by Manufacture (NVAM) thereby raising the level of employment in KVIs. Expansion of production cycle in Khadi coincided with growth of Village Industries and adoption of relatively labour saving improved technology inhibited the growth of employment.

Capital cost of production is very small because KVIs are capital saving and labour intensive with capital output of 2:1. The study shows that despite the support, received from KVIC, like nominal rate of interest (four per cent) on loans, exemption from sales tax and rebate for marketing of Khadi, these institutions are unable to face the competition from the organised sector.
The technology adopted by these institutions for raising quality of output and productivity of labour and reducing cost of production was not enough to overcome the problem of competition from the factory sector and had not increased the employment. Scale of operation was not viable enough to sustain independent marketing depot. Modern Management tools like production planning and inventory management was yet to be adopted by them. The researcher had recommended more assistance of capital expenditure loan for adoption of better technology, organisation of common marketing net work for these Institutions so as to minimise the marketing overheads and training on modern management tools like inventory control and so on to the functionaries of these institutions to raise the efficiency thereby improve the performance of the institutions.

Jagatheeswari S et.al.,\textsuperscript{38} deals with the production of various varieties under organised sector at Pallipaiayam with a capital outlay of Rs 53.4 crores investment and annual production of 20,000 metric tonnes of paper using bamboo, hard wood and baggase and deploying 227 workers in direct and indirect employment. The mill was taking care of treatment of effluent for preserving the environment and maintaining good ecological balance.

Rao G V K etal.,\textsuperscript{39} surveyed 71 paper units (68 private, 2 co-operative and 1 KVTB unit) detailed the accounts of Kalpi hand made paper industries in UP for the period 1980-81 to 1984 - 85.

Mislira N D et.al.,\textsuperscript{40} in their paper had pin-pointed the shortfalls/lacunae in standardisation of machinery, technology and marketing
strategy, raining and technology, raw materials for IIMP units in general.

Sheslingiri Rao D\textsuperscript{41} had identified the outdated technology, crude and age old process of manufacture, Raw material problem, financial problem, lack of trained and dedicated personnel, as problems affecting the hand made paper industry.

Ujval Rajndhyksha\textsuperscript{42} had analysed the marketing potential of hand made paper in Muuibai and Ahinedabad in his article, lie envisaged that the DGS and D rate contract cannot be a reliable source due to the meagre orders, given and inordinate delay in settlement of the bills.

Me has recommended the following to improve the Accepted Tender (AT) sales in the field of kVIC that KVIC should have market research and aggressive sales promotion. It has to establish its own inspection centres all over the country and these centres should also act as major quality regulators. It should insist on standardised proforma form in DGS and D department in order to avoid harassment from the bill passing officials. It should make it binding upon the final party to make payment within the stipulated date. Otherwise penalty should be charged on them for overdue.

I le has also emphasised that m non-captive market, the printers need evenness and finish to ensure good printing work. The value added items that of such products are less costlier one than compared to the high cost of hand made paper products of uneven surface finish. Items
like file boards, envelopes and file covers are the promising product-lines for the hand made paper sector.

The author had recommended that the HMP industry should concentrate on the strengths and find the appropriate market segment, decide upon the appropriate product line and features, establish the competitive prices at which the product should be sold for the various products and decide upon the target customers at each level, that is retailer, wholesale as well as individual customer, determine the distribution network for the product, decide the channels/media for sales promotion, clearly layout the budget for building up the distribution network, provision for advertising and sales promotion as well as market research and KVIC has to link its production to its customer via marketing.

Singh S N et.al., have examined the problems in getting conventional raw materials for HMPIs, as the raw materials enjoy a fast growing demand for other uses. Hence the need for non-conventional material inputs for HMPIs. These non-conventional raw materials are Ankara (Calotropis Proccena), Banana (Musa Sepiethum), Jute (Corchorus capsulaisates), Munj (Sachanum Munja), Sunn hemp (Croto saria Juncia), Sisal (Agva Sislana), Shogun (Dephne paparacia), ramie (Boehmeria nivea), Bhang (Cannabis Sativa), sahute (Mom Alba) and shredded currency waste materials.

In another paper "Emerging technologies of hand made paper products Singh S N et.al., have highlighted the need for product development keeping in the views the end customers. He suggested
workers motivation and training for the proper utilisation of the equipment’s, quality of supply and on delivery in time. Manufacturers should have direct contact with the custom changing taste and requirement, lie also suggested opening of well equipped product development section in every region with well-trained professionals. The manufacturers shall bring out brochures periodically for updating the customers about the new products and should conduct market survey to collect the data regarding customers need.

STATKMKNT OF THE PROBLEM

Despite several development programmes, Khadi and Village Industries have reached only about 3 per cent of the rural masses in India and Illic hand made paper industry has reached only 0.25 percent of the rural masses. Therefore, efforts must be taken for expansion as well as diversification of these activities in a systematic and dedicated manner. Diagnosis of existing activities of hand made paper industry in Tamil Nadu will be a fruitful one in guiding and planning for the expansion of these activities.

OBJECTIVES OF THE STUDY

The present study aims at examining the performance of hand made paper industry under the fold of Tamil Nadu Khadi and Village Industries Board and a registered institution Gandhi Ashram, dhiruchengodu in Namakkal district. The major objectives of the study are:
(2) to study the production and sales performance of hand made paper industry in Tamil Nadu;

(2) to assess the trends in income and employment generation in hand made paper industry;

(3) to find out the extent of adoption of improved technology in hand made paper industry; and

(4) to suggest measures for the promotion of hand made paper industry in Tamil Nadu.

MKTIIODOLOGY

SAMPLE DESIGN

Review of available literature, attempted above, shows coverage problems of Khadi and village industries as well as the performance of a few hand made paper units outside Tamil Nadu. However, the review has enabled the researcher to identify the untouched areas of hand made paper industry. In Tamil Nadu there are 25 hand made paper units functioning under Tamil Nadu State Khadi and Village Industries Board and other khadi institutions. Study of these units and factors which bear upon their performance will be a valuable feedback for improvement of the functioning of these units as well as for starting new units.
LOCATION OF STUDY AREA IN TAMIL NADU

Legend:
- State Boundary
- District Boundary
- Study Units
At present there are sixteen hand made paper units functioning in Tamil Nadu KVIB besides eight units which have become dormant. The functioning units comprise fourteen departmental units of TNKVIB, one cooperative society unit and one unit run by Gandhi Ashram, Thiruchengodu, a registered institution having certificate of KVIC. The Board has organised its activities under five regional deputy directors. Madurai region liaisons five HMP units, Salem region - two units, Coimbatore region has two units, Trichy region has one unit and Vellore region has four units. Of the fourteen departmental units as located above, two units in Salem region, two units in Vellore region were started recently and therefore they do not have data for sufficiently long period for the research.

Based on simple random sampling method four departmental units were chosen by drawing lot for Madurai, Trichy, Coimbatore and Vellore regions. The singular unit of Trichy region was included making a sample of five departmental units which consists of two units from Madurai region and one unit each from Trichy, Coimbatore and Vellore region. Two functioning units, one by cooperative society and one by registered institution were added to the sample. Thus, the present exercise has studied a sample of seven HMP units comprising five departmental units, one cooperative society and one registered institution as shown below:

2. Hand made paper unit at Mahendramangalam village in Karur District.
3. Hand Made Paper unit at Senbagapudur village in Erode District.
4. Hand Made Paper unit in Athiyuthu village in Tuticorin District and
5. I land Made Paper unit at Aruppukottai in Virudhumagar District.
7. Tliiniclicngodu (jandhi Ashrams" Hand Made Paper unit at /ainiri Kllampalli village in Namakkal District.

PROFILE OLTIL SAMPLE UNITS

ARAPPAKKAM  IIXIP UNIT

Arappakam Handmade paper unit, Arappakkain post Ratnagiri (Via), Vellore District was started on 12-9-1960 under "Samuthaya Abivirutlu Thittanr' (Plan of Community Development) and was inaugurated by Pate Sri.K.Kamaraj, then Chief Minister of Tamil Nadu. The unit is housed in asbestos roofed pucka building in an area of 0.79 acres of land, 'lic following machinery had been installed in the unit.

<table>
<thead>
<tr>
<th>Si.No.</th>
<th>Particulars</th>
<th>Nos.</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Beater - paper pulp making machine</td>
<td>one</td>
</tr>
<tr>
<td></td>
<td>18&quot; X 24 &quot;</td>
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<td></td>
<td>— do -- 24&quot; X 30&quot;</td>
<td>one</td>
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<tr>
<td>2</td>
<td>open type Digester</td>
<td>one</td>
</tr>
<tr>
<td>3</td>
<td>Paper cutting Machine</td>
<td>one</td>
</tr>
<tr>
<td>4</td>
<td>Screw press 3 &quot; X 4&quot; X 1&quot;</td>
<td>one</td>
</tr>
</tbody>
</table>
5. Calendar Machine 12” X 36” one
6. Auto vats (sheet / Paper)
7. Boards lifting equipment’s four
8. Water arrangements one open well.
   And a bore - well with electrical arrangements are available.
9. Generator One
10. Platform balance 300 kg. One
11. Trolleys Two

The unit is mainly making following varieties of paper, board and other converted items.

*Paper and Board*
1. Impression Paper.
2. File boards.
3. Millboards.
4. Colored Wrapper sheets.
5. Bond Papers.

*Converted stationery items*
1. File covers.
2. X - ray covers in the size of 18” X 15”, 15” X 12”, 10” X 12”, 10” X 8” and
3. 61/2” X 43/4”
4. Envelopes 9 " X 4"
5. Alphabate Grooved sheets for school children learning purpose.
The unit employs 31 workers and it gets raw materials from Social Welfare Board, Vellore. Aswathroy & Co., 127, Adham Sahib Street, Rayapuram, Chennai besides centralized raw material supply from TNKVIB, Kuralagam, Chennai. The finished goods of the unit are disposed off through TNKVIB., Chennai through the Assistant Director at Vellore District office and small quantities of stationery items such as file covers envelopes are supplied to prison schools and offices located in Vellore and surrounding places.

As TNKV.I Board maintain marketing depots in all major towns, the departmental unit sells their output to marketing network of the Board. Therefore data on sales in the accounts of these departmental units represent only transfer to the sales depot and not sales to consumers. Thus it is not possible to measure actual sales of the departmental units.

For ensuring uninterrupted current supply of power, a generator has been installed at an invest of Rs. 1.55 lakhs; but it is lying idle as the volume of production is small due to three main reasons. Workers are dissatisfied with delay in the implementation of Minimum Wage Act. The unrest of the workers has brought down the volume of work.

Secondly, the surrounding places of the unit has been much affected due to illegal letting out of effluents of a private tannery in the neighbourhood. This has made the underground water hard. With brakish water, production of high grade papers maintaining acidic PH is expensive adversely affecting the cost of production of the paper considerably. As such the unit is constrained to go far cheap varieties
such as wrapper sheets, low grade impressions papers file covers, file boards and mill boards. Centralized raw material supply and lot of cumbersoin procedural works of bueracraey affects the work considerably.

Thirdly, the technical superintendent of the unit was replaced in 1994-95 by a ministerial staff, not trained in paper industry.

MAHENDRAMANGALAM HM UNIT

The handmade paper unit, Mnhendramangalam, Snmvasanallur is situated on the hank of Cavery river.

Tamil Nadu Government started the handmade paper unit, utilizing the good fresh water supply, road transportation workshop facilities, and abundant raw material resources in order to generate employment opportunities for the villagers. The unit is located in fertile land ensurrounded with commercial crops such as plantain, coconut, heattle leaves, sugarcane and staple food crop paddy growing fields.

The unit was started on 17-8-61 and about 50 workers are employed in the unit including 10 members of permanent staff and 7 regular workers. The remaining are causal labourers on contract basis.

The unit's main building of 2300 square feet was constructed at a cost of Rs. 14,282 in 1960. The unit has buildings of 7240 square feet including 1900 square feet of drying yards.
The following machinery and equipments are housed in the unit:

1. Beater machine 30" X 36" with 150kg (Pulp making machine pulping capacity - one)
2. Hippmg vats - four nos.
3. Auto-vats for sheet lifting - four nos.
4. Screw press 2.5 " X 3.3" - one
5. S hydraulie press - one
6. Calendar machine 13." X 30" - one
7. Calting machine 30" - one
8. Cnnerntor 350 WATTS - one
9. Platform balance 300 kg - one.

This unit is one of the successful hand made paper units, producing high grade varieties like bond paper, manifolding paper, white paper and file covers and stationary varieties of high standard. As the unit has experienced and skill enriched paper makers it could introduce marbling process on bond papers and card sheets raising the unit value of the output.

For supply of raw materials like white and coloured rags, this unit too depends on centralised supply from head office of TNKVIB, Chennai. The unit gets press cutting from printing presses at Thiruchirappally, Brode, Sivakasi, Madurai, Dindigul and from the whole sale dealers available at Thiruppur, Musiri, Brode, Madurai, Sivakasi and Coimbatore. There is no dearth of rawmatenal or Chemicals for the unit.
Water for the unit is obtained from bore-well of the unit. Potable water is available throughout the year as it is situated on the bank of river Cavery. Most of the production activity is carried out in dipping method process of paper lifting.

As in most of the Khadi Hoard units, unrest is found among the workers due to wage question.

**SHENBAGAPUDUR HMP UNIT**

The HMP Unit at Shenbagaptidur was established in 1950 by the T.N.Govt., order no. MS 300 dated bKV/907 for providing gainful employment to nearby villagers.

The paper unit is housed in 5.50 acres, Nine puckka buildings with asbestos roofing and R.C.C. construction and two thatched roofing sheds are there. All these buildings were constructed with a cost of Rs. 2.10 lakhs, dotal number of permanent staff working were nine and that of the workers were fourly nine, d'he unit is having good potable water from well. The Bavani Sagar dam is at a distance of nine kilometre from this unit; as such no dearth of water for this unit for its water requirements.

With Rs. 1.97 lakhs cost., the following machinery and equipment available in the unit production activities are carried out. Tins is one ol another good unit of TNKV1B for high grade varities of paper and board making. Many experienced workers are employed in this unit
and excellent papers of high grade varieties are in production. These workers are working with much dissatisfaction on llic wage structure of the TNKVIB. This unit workers too wants at least minimum wages as per the Act. of Tamil Nadu is to be promulgated and after quite many years of sustained demand too, they are not secured with the job.

Major varieties of hand made paper production at this unit are Writing paper, Bond paper, Manifold paper and High grade card sheets, for its rawmaterial requirements, llic unit is depending upon llic central pool supply from TNKVIB, (.'hennai through the Asst. Director's office at brode. Directions are issued from TNKVIB Central office, (.'hennai to the raw ninterial suppliers operating throughout the State. Mostly parlies at (.'hennai, Musiri, Tluruppur, brode, Madurai and Sivakasi are directed to supply the same. Though the raw -materials, cotton hosiery are abundantly available from Thiruppur, brode, Counbatore, Madurai and Sivakasi, the industrial /Textile bells are situated within the radious of 200 kins, in view of the policy of the TNKVIB of centralized raw material supply, the cost effectiveness of dearer raw material is affecting the products cost to a greater extent.

Despite of all these disadvantages with the trained workers and supervisory stuffs the unit produces very good high grade papers and boards, which is liked by any lovers of eco-fnendly papers for its elegance. And most of the products of this unit are disposed off through their channel of marketing outlet as hot cake, leaving very less quantity as work in progress and as finished goods.
The following machinery and equipments are available at this unit,

1. Beaters 50 kg capacity and one each 100 legs capacity.
2. Screw press one
3. Hydraulic press one
4. Paper lifting vats Nine
5. Calandering machine 18"X36" one
6. Cutting machine 36" with traction one each motor attached and without power - hand operated.
7. Ruling machine one
8. Trays for marbling process Two nos.
9. Platform balance 300 kg one

With the above machinery and equipments the units installed capacity per annum is 50 Metric Tonnes. Value addition on finished goods of paper and boards are ensured in the earnest sincere manner by converting the paper and boards into matching colour envelopes and letter heads, file covers, scribbling pads, Telephone diaries, Fancy shopping bags duly marbled stationery note books by ensuring ruling on writing and bond papers in full-swing.

ATHJYUTHU HMP UNIT

Athiyuthu HMP unit is situated in Tuticorin district. It is situated on the bank of Thamirabarani river and is just away from Tirunelveli at a distance of 36kms. The unit was started by 1967 with an intension to
provide gainful employment opportunity to the Athiyuthu and nearby villagers. There is no dearth of labourers and potable water to this unit. The water requirement of the unit is met-out from an open well. The prominent product under manufacture is card boards. Little quantity of conversion items such as file pads, file covers and envelops are also attended to periodically.

The following, machinery and equipments have been installed in the unit.

1. Renter machine 30" x 36" - one
2. Paper lifting, vats - Five nos.
3. Hydraulic Press - one
4. Calendaring machine 12" x 36" - one
5. Cutting, machine 36" - one
6. Trolley - Two nos.

Open yard is utilised for boards drying. The unit is housed at 11/2 acre of land with puckka structure measuring 1 200 Square feet and all required infrastructure facilities are available in the nearby towns and within the village. In view of low cost, industrial utility product manufacture that is card board though the quantity of production is more, the value accrued is very less compared to that of high grade paper and board manufacturing unit.

The unit is constantly employing only eight number of workers for carrying out its production activities. The value of building of the unit is Rs.67000 and that of the machineries and equipments Rs.78000 on these products is around Rs.200000 only and due to the less wages payment and less establishment charges, this unit had shown
marginal profit for some years, otherwise like that of any HMP unit under the purview of TNKV1.13, this unit too suffers loss.

As usual like that of the majority of the TNKV1B units, this unit too supervised by a ministerial staff, who is not having any technical background to carryout the day-to-day business. On the guidelines of trained workers and that of the directives of the higher-ups available at TNKVIB office at Thirunelveli, the supervisor is looking after the business of the unit.

Though card-boards demand is more, the unit undertakes for multifarious utility varieties in packaging industry, llic marketing aspect of the units is not understood by the higher- ups of TNKVIB and the right direction of marketing approach is not adopted as such, psuedo market glut is visualised by this unit.

ARUPPUKOTTALI HMP UNIT

This unit too started in the year 1960 under the scheme of Social Development of Tamil Nadu Government. The unit is housed in the outskirts of Aruppukotlai municipal town on Aruppukottai-Tiruchuli main road at Gandliinagar in Virudhunagar district. As the unit is in Aruppukotlai municipality, there is no dearth of infra-structural facilities. Water requirement of the unit is met-out from an open well available in the premise of the unit. The unit is housed in 2 acres of land with puckka structure of main workshed admeasuring 1400 square Feet. Paper and board drying purpose drying sheds are also available. For thicker gramage of board drying, the same is ensured by placing in
the open ground. As the open well is of brakish nature the same is softened by placing Aluminium sulphate pebbles into the well.

The following machinery and equipments have been installed in the unit.

1. Beater machine 30" x 36" - one
2. Paper lifting vats - Four nos.
3. Screw Press - one
4. Calendering machine 12" x 36" - one
5. Cutting machine 36" - one
6. Trolley - Two nos.

On an average 27 workers are continuously employed in this unit. Chief varieties under manufacture at this unit are: impression paper, wrapper sheets and stationery items such as envelops, file covers, note books.

Heavy stock of impression paper of poor quality papers were found at the time of data collection, quite good number of stationery items are under manufacture catering to the need of their official requirements. And the stationery items are quite moderate in quality. Like any such TNKVIB unit, this unit is also bogged-up with labour unrest for want of implementation of Minimum Wages Act. However, workers are attending their daily routines regularly with dissatisfaction. The unit is having building and compound wall with a cost of Rs. 170000 and is having machinery and equipments to the tune of 240000 of course the machinery and equipments are quite old and needs replacement.
Brammadesam is a small village situated at a distance of 15kms away from Ambasamudram in Tirunelvcli district. The village is surrounded with staple crops of paddy as well as commercial crops like, plantain and sugarcane. Braminadesain is not having dearth of potable water as canals of Thannraparani river is available for irrigation.

Braminandesam IIMP cooperative society was promoted by a veteran (iandian called Padmmnaba lyyer somewhere in P)30\'s duly donating his own land for the cause of promoting IIMP caul board unit. Later-on the management of the unit is passed on to cooperative type of production unit and the same was adopted by TNKVIB in llic year 1960.

The mill is mainly producing straw board by utilizing locally available straw as raw material. Though the unit is located little interior, its marketing tie-up are well established by the secretary one Mr.Balakrishnan for a quite many years with traders at Trivandruru and Sivakasi.

The unit is having all amenities with a sprawling area duly housed with the following machinery.

1. Beater machine 24" x 30" - Two
2. Paper lifting vats and cement pulp tanks - four nos.
3. Screw Press - one
4. Calendaring machine 12" x 36" - one
5. Cutting machine 36" - one
6. Trolly - Four nos.

The whole unit is housed in 6000 square feet area with pucka and semi pucka sheds and open space at the rear side with a provision of toilet and both rooms for men and women workers. The value of building is Rs.44000 and that of the machinery and equipments is Rs.23000. On an average this unit had provided gainful employment to 52 workers.

**TIFjWL 'ULNdOIW I IMP UNIT**

At xamm Ellainpalh, Thiruehengodu in Namakkal district under the Research and Development programme of KVIC, in the year 1985-86, Cylinder Mould Vat (CMV) was implemented. The unit is located in the left bank of river Cavery. Good potable water is available at this unit. The unit is surrounded with paddy and sugarcane fields. As perennial water supply is ensured for agricultural activities villagers in and around of Zamin Ellampalli are having work on agricultural activities throughout the year. Surplus labourers of agricultural activities are engaged in this I IMP unit.

Unlike TNKVIB unit, this particular unit is promoted by KVIC directly by supplying required machineries and equipments of appropriate technology and by posting a technical supervisor to look-after the day-to-day routine. On CMV machine, multi layer file card
sheets alone are manufactured duly ensuring compactness, colour, even-thickness and above all quality smooth, finish file cards liked by any customer is in production, whatever quantity of product, produced are sold like hot-cake with the marketing tie-up established by the reputed Gandhi Ashram with Government and Non Governmental Organizations. Once successful trial was ensured by KVIG, the entire plant was transferred to Gandhi Ashrams' total management of the unit.

The following machinery and equipments are available with the unit.

1. 36" Face value of CMV - one
2. 30" x 36" Beater - Two nos
3. Pulp tank with stirrer duty attached with motor - one
4. Calendering machine 12" x 36" - one
5. Cutting machine 36" - one
6. Trolleys - Two nos
7. Tao Sucky (for paper drying) - one

Entire unit is housed in an old palace of 6000 square feet. The unit is well managed and is registering profit year after year besides providing gainful employment opportunities on an average to 11 persons per annum.

All amenities to workers are also made available in this unit as per factory Act. Workers' wages also taken care of by the Gandhi
Ashram management and there is no displeasure found in the working of the unit, unlike the TNKV1B units functioning.

DATA BASE

The study mainly uses secondary data on production, sales of hand made paper products. The data were collected from the records of the Institutions and annual returns of Tamil Nadu Khadi and Village Industries Board including the audited statement of accounts for a period of 12 years from 1986-87 to 1997-98.

METHODS AND TOOLS OF ANALYSIS

for the present study, statistical tools like percentages, averages and graphs have been used for studying the performance of the institutions under investigation. Pertinent graphical representations have been employed for highlighting the important factors of activities.

PERIOD OF STUDY

The study covers production, sales, employment and earnings of these units for a period of twelve years from 1986-87 to 1997-98.

CONCEPTUALISATION

A proper definition and explanation of the concepts used in this study would help in understanding the discussions. The concepts to be clarified are:
Hand Made Paper: Wet layer of paper/board made by hand with simple equipment.

Beater: RCC trough in an elongated cylindrical size with perfect half circle at its both end duly housed with rollers bed plate both with blades for ensuring paper pulping process.

Cistern: Storage tank for beaten paper pulp.

Slock is the mixer of semi-beaten pulp along with water in beater trough for further processes.

Auto Vat: An equipment devised for paper formation and lifting process.

Mould is a rectangular wooden frame duly fixed with -10/60/S0/100 wiremesh with supporting wiremesh of 6 or 8 on barbed wooden supporting frames and duly felted on the brime of moulds top surface units both length and breath frames alone enabling for wet-web (sheet) formation on deckle in the presence of water in vat.

Deckle is the rectangular supporting frame with an upper and lower deckle enabling this mould to fix in between and hooked with "J" hooks ensuring oscillation while sheet formation and to create natural suction of air while raising the level of lower deckle with the peddaling arrangement made in the vat.
Cylinder Mould Vat: An equipment of intermediate technology using power. It is a hollow cylindrical drum with 36" face wiremesh on its surface, housed in a KCC tank, in water base enabling sheet/paper formation on rotation of cylinder mould.

Impression Paper: Typing paper of tissu variety weighing less than 20 (iSM manufactured by hand for typing and writing purpose.

File Hoards: Indian made papers with more rag/fibre content weighing between 100 and 200 GSM used for making file covers.

Mill Boards: Cheap variety of jacking boards made out of waste papers and waste boards exceeding 100 GSM.

Coloured Wrapper Sheets: Mixed colour papers weighing less than 30 (iSM used for wrapping and packing purposes.

Bond Paper: Papers manufactured with X0 to 100 percent cotton rags as raw material weighing 15 to 20 GSM with smooth finish.

Fixed capital: Fixed capital is the net value of fixed assets comprising land, building, machinery, equipments, tools, vehicle and furniture.

Khadi: Khadi means any cloth woven on handloom in India from cotton, silk or woolen yarn or a mixture of these yarns handspun in India.
Village Industry: Village Industry means any industry located in rural area (population of which does not exceed 20000) which produces any goods and services with or without use of power and in which the fixed capital investment (on plant and machinery and land and building) per head of an artisan or a worker does not exceed Rs.50000.

Registered Institutions: Institutions registered under Societies Registration Acl carrying mil the Khadi and Village Industries activities with the certification of KVIC, Mumbai-56.

Rupee: Rupee is a unit of Indian currency with rupees in plural. One rupee is equal to US$ 0.021 and one U$S is equal to Rs.45.62 (as on 31-07-2000).

Labour Productivity is the average value of production divided by number of labourers working in this unit.

Capital output ratio is this ratio of (be value of fixed assets used by the sample units for producing one rupee value of paper / board / products by manufacture.

Labour capital ratio is the ratio of fixed assets used by the total workforce for manufacturing activities in the sample units.
SCOPE AND LIMITATIONS OF THE STUDY

The study discusses the different types of paper and board products and analyses the volume and value of production, capital invested on plant and machinery, employment of labour and the level of wages paid to the labourers. The production pattern, product development, adoption of technology and marketing have also been studied in this work.

The study has been confined to only seven sample units. There are hand made paper units promoted and run by private owners in the State. Due to non-availability of reliable data from them, they could not be covered under this study.

With regard to five units of the Board in the sample, all the products manufactured in respective units are simply transferred to district offices for marketing. As such, particulars of unitwise actual sales to final consumers do not exist. Thus, data on sales, used in this study represent value of goods transferred from the sample units to the district offices and not the actual sales to the consumers.

C'SIAITLRISATION

Chapter 1 introduces the historical background of Hand Made Paper Industry, its development in India and Tamilnadu. Chapter 2 carries design of the study comprising review of earlier works, identification of issues for research, objectives, methodology including sampling plan and chapterisation of the exercise. Chapter 3 deals with
production processes of Hand Made Paper Industry, analysis of production and sale of paper and board products. Analysis of employment generation and wages paid are presented in Chapter 4. Chapter 5 is addressed to product development of hand made paper and importance of value added items. Chapter 6 focuses on the special features of hand made paper units in general and the factual position of Tamilnadu hand made paper units in particular and the final chapter presents summary of findings and conclusion.
REFERENCES


